UNITED STATES PATENT AND TRADEMARK OFFICE

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10/807,662	03/24/2004	Vahit Hakan Hacigumus	SVL920030133US1	6512

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 January 2009</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-44</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-44</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>30 January 2009</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>20090130</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   A reply to the notices of non-responsive and non-compliant amendment was
received on 30 January 2009. By this reply, Claims 1, 2, 8, 10, 11, 14-18, 24, 26, 27,
30-32, 38, 40, 41, and 44 have been amended. No claims have been added or
canceled. Claims 1-44 are currently pending in the present application.

Response to Amendment

2.   Applicant's responses to the requirement for information set forth in the previous
Office action under 37 CFR 1.105 (see pages 20-23 of the present response) are
acknowledged and are sufficient to answer the interrogatories set forth. Additionally,
receipt is acknowledged of the submitted publication; if Applicant becomes aware of
other publications which any of the applicants authored or co-authored and which
describe the disclosed subject matter of the present application, Applicant is respectfully
requested to submit those publications as they may become available.

3.   The declaration under 37 CFR 1.132 filed 30 January 2009 is insufficient to
overcome the rejection of claims 1-44 based upon the Hacigumus reference applied
under 35 U.S.C. 102(a) as set forth in the last Office action because:

      The declaration states that the additional author, Chen Li, "is not an inventor of
the claims in the above-identified patent application." However, the "above-identified"

application in the declaration is the parent application of the present application, Serial

No. 10/449,421, and the declaration does not refer to the present application or its

claims. The claims of the parent application (now issued as US Patent 7500111) are

not the same as the claims of the present application and do not include all of the

subject matter required by the claims of the present application. Therefore, the

statement that Chen Li is not an inventor of the claims in the parent application is not

sufficient to establish that Chen Li is also not an inventor of the claims of the present

application. See MPEP § 2132.01 regarding rebuttal of a *prima facie* case by showing

that a reference's disclosure was derived from Applicant's own work; see also *In re

Katz*, 687 F.2d 450, 215 USPQ 14 (CCPA 1982).

Response to Arguments

4.   Applicant's arguments filed 30 January 2009 have been fully considered but they

are not persuasive.

       Regarding the warning that Claim 16 would be objected to as a substantial

duplicate of Claim 15 if Claim 15 were to be found allowable, Applicant argues that the

claims are not duplicates because Claim 15 is directed to a client computer and Claim

16 is directed to a server computer (page 16 of the present response). However, the

Examiner respectfully disagrees, noting that each of Claims 15 and 16 is directed to a

system that includes a client computer and a server computer connected to each other.

Although the client and server computers are recited in the opposite order in the two

claims, both claims recite the client and server computers and that they are connected.
Therefore, there is not a substantive difference in the scope of the claims, and thus the
claims are considered to be substantial duplicates.

Regarding the rejection of Claims 1-44 under 35 U.S.C. 112, first paragraph, for
failure to comply with the enablement requirement, Applicant argues that the present
specification does, in fact, provide enabling written description of the phrase "actual
results" (pages 16-18 of the present response). Applicant refers to the present
specification and attempts to draw a distinction between the "actual results" and the
other results such as the various temporary and intermediate results (see pages 17-18
of the present response, citing page 7, line 12-page 8, line 9 of the specification, as
amended at pages 2-3 of the present response). However, there is no description in the
quoted portion of (or elsewhere in) the specification or in the present response of how
the various temporary or intermediate results, for example, are not also actual results.
The Examiner notes that the word "actual" is defined as, for example, "existing in fact or
reality" (see Merriam-Webster's Online Dictionary, 11th edition). There is no indication
that the temporary and intermediate results do not exist or are otherwise not actual or
real results. Therefore, the Examiner maintains that there is not sufficient enabling
disclosure as to how the actual results are to be distinguished from any other results
that are produced. It does appear from Applicant's assertions that what may have been
intended is language along the lines of "final results" in place of "actual results";
however, this is not sufficiently clear from the specification in and of itself.

Regarding the rejection of Claims 1-44, and specifically Claims 1, 9, 15-17, 25, 31, and 39, under 35 U.S.C. 112, second paragraph, Applicant refers to the arguments noted above that the claimed "actual results" are defined and distinguished from other results recited or described (see pages 18-19 of the present response); however, again, the Examiner maintains that there is no description of how the other results are not also actual (i.e. real or existing) results, and therefore this still renders the claims indefinite.

Regarding the rejection of Claims 2, 18, and 32 under 35 U.S.C. 112, second paragraph, as indefinite, Applicant argues that the claims do recite an order for the operations (page 19 of the present response). However, as clarification, the Examiner notes that it is not clear from the limitations of Claims 2, 18, and 32 in what order or when in the overall methods etc. of independent Claims 1, 17, and 31 that the operations recited in the dependent Claims are intended to be performed. For example, it is now further unclear where the steps of decryption, performing operations on the decrypted intermediate results set, re-encrypting the updated results set, and returning the re-encrypted set, recited in Claim 18, are intended to be performed in relation to the steps recited in the method of Claim 17, from which Claim 18 depends. Additionally, it appears that the "updated intermediate results set" in Claim 18 is intended to be the same updated intermediate results set as recited in Claim 17; however, it is unclear as to whether the operations in Claim 18 are independent of or the same as the operations on the updated results set recited in Claim 17, and similarly for the corresponding claims.

Regarding the rejections with respect to the limitation "the intermediate results set" (for example, Claims 6 et al), Applicant asserts that the claims have been amended to overcome these rejections (page 19 of the present response); however, it appears that the issue remains as to which intermediate results sets these limitations are intended to refer, as detailed below.

Regarding the other issues of indefiniteness noted in the previous Office action, namely the use of the pronoun "it", the use of the phrase "optimizes placement", and the omission in Claims 17-44 of essential steps, these issues appear to have been remedied by the amendments to the claims.

Regarding the rejection of Claims 1-44 under 35 U.S.C. 102(a) as anticipated by Hacigumus et al, "Executing SQL over Encrypted Data in the Database-Service-Provider Model", Applicant first argues that the claims are entitled to a priority date at least as early as the filing date of the parent application (i.e. 30 May 2003; see page 23 of the present response). The Examiner does not dispute this characterization at this time. However, Applicant further asserts that the declaration submitted 30 January 2009 shows that the Hacigumus reference is a description of the present invention and the publication was made on behalf of the Applicants (page 23 of the present response), and the Examiner respectfully disagrees. As detailed above, the declaration does not refer to the claims of the present application, but only to the parent application and the claims thereof, and therefore is not sufficient to establish that the additional author of the Hacigumus reference, Chen Li, is not an inventor of the presently claimed invention.

Therefore, contrary to Applicant's assertion, the Hacigumus reference may still be applied as prior art under 35 U.S.C. 102(a).

Therefore, for the reasons detailed above, the Examiner maintains the rejections as set forth below.

Drawings

5.   The objection to the drawings regarding the informalities in Figure 1 is withdrawn in light of the amendments to the drawings and the specification.

Specification

6.   The objection to the abstract for informalities is withdrawn in light of the amendments to the abstract. The objection to the disclosure for informalities is NOT withdrawn. Although most of the issues raised in the previous Office action have been corrected, the amendments also raise new informalities as detailed below.

7.   The disclosure is objected to because of the following informalities:

The specification contains grammatical and other errors. For example, in the paragraph beginning at page 13, line 3 (as amended at page 3 of the present response), the phrase "generating a (possibly) super-set of results" is still generally unclear. In particular, it is unclear how the parenthetical makes grammatical sense if it is in place.

Appropriate correction is required. It is again noted that the informalities noted in
this and the previous Office action are not intended as an exhaustive list of errors in the
specification. The lengthy specification has not been checked to the extent necessary
to determine the presence of all possible minor errors. Applicant's cooperation is again
requested in correcting any errors of which applicant may become aware in the
specification.

Claim Objections

8.   The objection to Claims 14, 17, 30, 31, and 44 for informalities is withdrawn in
light of the amendments to the claims.

9.   Claims 2, 18, and 32 are objected to under 37 CFR 1.75(c), as being of improper
dependent form for failing to further limit the subject matter of a previous claim.
Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s)
in proper dependent form, or rewrite the claim(s) in independent form. Specifically,
each of Claims 2, 18, and 32 recites decrypting the intermediate results set, performing
operations on the decrypted set to generate the updated results set, re-encrypting the
updated set, and returning the re-encrypted set to the server; however, each of Claims
1, 17, and 31, from which they depend also include these steps.

10.   Applicant is advised that should claim 15 be found allowable, claim 16 will be

objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two

claims in an application are duplicates or else are so close in content that they both

cover the same thing, despite a slight difference in wording, it is proper after allowing

one claim to object to the other as being a substantial duplicate of the allowed claim.

See MPEP § 706.03(k). See above for further detail.

Claim Rejections - 35 USC § 101

11.   The rejection of Claims 17-44 under 35 U.S.C. 101 as directed to non-statutory

subject matter is withdrawn. Regarding Claims 17-30, in light of the recent ruling in *In*

re Bilski, 88 USPQ2d 1385 (Fed. Cir. 2008), the claimed methods are considered

statutory subject matter because they are tied to a particular machine. Regarding

Claims 31-44, the rejection is withdrawn in light of the amendments to the claims

deleting "logic" and adding a "storage device" that stores software instructions.

Claim Rejections - 35 USC § 112

12.   The rejections of Claims 1-44 under 35 U.S.C. 112, first and second paragraphs,

for failure to comply with the enablement requirement and as indefinite, respectively, are

NOT withdrawn for the reasons detailed above.

13.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

14.   Claims 1-44 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the enablement requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to enable one skilled in the art to

which it pertains, or with which it is most nearly connected, to make and/or use the

invention.

        A determination of a failure to comply with the enablement requirement is made

considering the undue experimentation factors set forth in MPEP § 2164.01(a). In the

present application, the factors that appear to weigh most heavily are the breadth of the

claims (MPEP § 2164.08), the amount of direction provided by the inventor (MPEP §

2164.03), and the existence of working example (MPEP § 2164.02). Independent

Claims 1, 15, 16, 17, and 31 each broadly recite the limitation "in order to produce

actual results" or "producing actual results". Dependent Claims 9, 25, and 39 also recite

the limitation "in order to produce actual results". These limitations constitute an

extremely broad recitation of a description of results produced. However, there is

nothing in the specification that suggests what might distinguish "actual" results from

any other results that are produced. The only descriptions in the specification largely

use the same language as is present in the claims. These descriptions clearly do not

provide a working example, other than to suggest that the actual results are displayed to

the user (page 8, line 9 of the specification). This indicates that there is little direction

provided by the inventor and no clear working example. Combined with the broad

recitations of the claims, this suggests that the enablement of the description is not

commensurate in scope with the claims (MPEP § 2164.08) and that undue

experimentation would be required to make or use the invention based on the

disclosure (MPEP § 2164.06).

Claims not specifically referred to above are rejected due to their dependence on

a rejected base claim.

15.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

16.   Claims 1-44 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 1 recites the limitation "to produce actual results" in lines 10-11. This is

generally unclear, as it is not clear how "actual results" are distinguished from any other

results, such as the intermediate results set, or any other results of any of the functions

performed by the claimed system. Further, there is nothing in the claims or specification

that defines or distinguishes "actual results" from any other results. This renders the

claim indefinite.

Claim 2 recites several additional functions (decrypting, performing operations,

re-encrypting, and returning) that the system performs. However, it is not clear at what

point (i.e. in what order) in comparison to the operations recited in Claim 1 that these

functions are to be performed, and it is not clear if these functions are intended to be
duplicative of similar and/or corresponding functions recited in Claim 1. This renders
the claim indefinite. Further, the claim recites "the intermediate results set" in line 2. It
is not clear whether this is intended to refer to the "encrypted intermediate results set" in
line 7 of Claim 1 as amended, the "updated intermediate results set" in line 9 of Claim 1,
the "re-encrypted intermediate results set" in line 11 of Claim 1, or the "encrypted new
intermediate results set" in line 12 of Claim 1.

Claim 6 recites the limitation "the intermediate results set" in line 2. It is not clear
whether this is intended to refer to the "encrypted intermediate results set" in line 7 of
Claim 1 as amended, the "updated intermediate results set" in line 9 of Claim 1, the "re-
encrypted intermediate results set" in line 11 of Claim 1, or the "encrypted new
intermediate results set" in line 12 of Claim 1.

Claim 9 recites the limitation "the intermediate results set" in line 2. It is not clear
whether this is intended to refer to the "encrypted intermediate results set" in line 7 of
Claim 1 as amended, the "updated intermediate results set" in line 9 of Claim 1, the "re-
encrypted intermediate results set" in line 11 of Claim 1, or the "encrypted new
intermediate results set" in line 12 of Claim 1. Claim 9 also recites the limitation "in
order to produce actual results". As described with respect to independent Claim 1, it is
not clear how "actual results" are distinguished from any other results.

Claim 15 recites the limitation "to produce actual results" in line 8. This is
generally unclear, as it is not clear how "actual results" are distinguished from any other
results, such as the intermediate results set, or any other results of any of the functions

performed by the claimed system. Further, there is nothing in the claims or specification

that defines or distinguishes "actual results" from any other results. This renders the

claim indefinite.

Claim 16 recites the limitation "to produce actual results" in line 8. This is

generally unclear, as it is not clear how "actual results" are distinguished from any other

results, such as the intermediate results set, or any other results of any of the functions

performed by the claimed system. Further, there is nothing in the claims or specification

that defines or distinguishes "actual results" from any other results. This renders the

claim indefinite.

Claim 17 recites the limitation "producing actual results" in line 17. This is

generally unclear, as it is not clear how "actual results" are distinguished from any other

results, such as the intermediate results sets, or any other results of any of the functions

performed by the claimed system. Further, there is nothing in the claims or specification

that defines or distinguishes "actual results" from any other results. This renders the

claim indefinite.

Claim 18 recites several additional steps (decrypting, performing operations, re-

encrypting, and returning) that the system performs. However, it is not clear at what

point (i.e. in what order) in comparison to the operations recited in Claim 17 that these

steps are to be performed, and it is not clear if these steps are intended to be

duplicative of similar and/or corresponding steps recited in Claim 17. This renders the

claim indefinite. Further, Claim 18 recites "the intermediate results set"; however, it is

not clear whether this is intended to refer to the first intermediate results set recited at

lines 5-6 of Claim 17, the transferred intermediate results set in line 8 of Claim 17 as amended, the decrypted intermediate results set at line 9 of Claim 17, the updated intermediate results set at line 10 of Claim 17, the re-encrypted intermediate results set at line 12 of Claim 17, or the new intermediate results set at line 14 of Claim 17, for example.

Claim 22 recites "the intermediate results set"; however, it is not clear whether this is intended to refer to the first intermediate results set recited at lines 5-6 of Claim 17, the transferred intermediate results set in line 8 of Claim 17 as amended, the decrypted intermediate results set at line 9 of Claim 17, the updated intermediate results set at line 10 of Claim 17, the re-encrypted intermediate results set at line 12 of Claim 17, or the new intermediate results set at line 14 of Claim 17, for example.

Claim 25 recites "the intermediate results set"; however, it is not clear whether this is intended to refer to the first intermediate results set recited at lines 5-6 of Claim 17, the transferred intermediate results set in line 8 of Claim 17 as amended, the decrypted intermediate results set at line 9 of Claim 17, the updated intermediate results set at line 10 of Claim 17, the re-encrypted intermediate results set at line 12 of Claim 17, or the new intermediate results set at line 14 of Claim 17, for example. Claim 25 also recites the limitation "in order to produce actual results". As described with respect to independent Claim 17, it is not clear how "actual results" are distinguished from any other results.

Claim 31 recites the limitation "producing actual results" in line 17. This is generally unclear, as it is not clear how "actual results" are distinguished from any other

results, such as the intermediate results sets, or any other results of any of the functions

performed by the claimed system. Further, there is nothing in the claims or specification

that defines or distinguishes "actual results" from any other results. This renders the

claim indefinite.

Claim 32 recites several additional steps (decrypting, performing operations, re-

encrypting, and returning) that the system performs. However, it is not clear at what

point (i.e. in what order) in comparison to the operations recited in Claim 31 that these

steps are to be performed, and it is not clear if these steps are intended to be

duplicative of similar and/or corresponding steps recited in Claim 31. This renders the

claim indefinite. Further, Claim 32 recites "the intermediate results set"; however, it is

not clear whether this is intended to refer to the first intermediate results set recited at

lines 7-8 of Claim 31, the transferred intermediate results set in line 10 of Claim 31 as

amended, the decrypted intermediate results set at line 11 of Claim 31, the updated

intermediate results set at line 12 of Claim 31, the re-encrypted intermediate results set

at line 14 of Claim 31, or the new intermediate results set at line 16 of Claim 31, for

example.

Claim 36 recites "the intermediate results set"; however, it is not clear whether

this is intended to refer to the first intermediate results set recited at lines 7-8 of Claim

31, the transferred intermediate results set in line 10 of Claim 31 as amended, the

decrypted intermediate results set at line 11 of Claim 31, the updated intermediate

results set at line 12 of Claim 31, the re-encrypted intermediate results set at line 14 of

Claim 31, or the new intermediate results set at line 16 of Claim 31, for example.

Claim 39 recites "the intermediate results set"; however, it is not clear whether this is intended to refer to the first intermediate results set recited at lines 7-8 of Claim 31, the transferred intermediate results set in line 10 of Claim 31 as amended, the decrypted intermediate results set at line 11 of Claim 31, the updated intermediate results set at line 12 of Claim 31, the re-encrypted intermediate results set at line 14 of Claim 31, or the new intermediate results set at line 16 of Claim 31, for example. Claim 39 also recites the limitation "in order to produce actual results". As described with respect to independent Claim 31, it is not clear how "actual results" are distinguished from any other results.

Claims not specifically referred to above are rejected due to their dependence on a rejected base claim.

Examiner's Note

17. Because the claims are rendered indefinite by the several issues detailed above in reference to the rejections under 35 U.S.C. 112, second paragraph, and the claims are not enabled as detailed in reference to the rejection under 35 U.S.C. 112, first paragraph, it has not been possible to determine fully the scope of the claims, and therefore it has not been possible to fully search the prior art for the claimed subject matter in order to make a determination regarding the patentability of the claims with respect to novelty under 35 U.S.C. 102 and non-obviousness under 35 U.S.C. 103. The claims have been interpreted to the extent possible in light of the issues of

indefiniteness, lack of enablement, and non-statutory subject matter. A search has

been made to the extent possible, and documents that appear to be relevant are cited

below.

Claim Rejections - 35 USC § 102

18.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed
> publication in this or a foreign country, before the invention thereof by the applicant for a patent.

19.   Claims 1-44 are rejected under 35 U.S.C. 102(a) as being anticipated by

Hacigumus et al, "Executing SQL over Encrypted Data in the Database-Service-

Provider Model".

        In reference to Claims 1-14, Hacigumus discloses a system that includes client

and server computers and a network connecting them (see page 217, Figure 1), in

which data from the client computer is encrypted by the client and hosted by the server,

the encrypted data is operated on by the server to produce intermediate results, which

are sent from the server to the client where the intermediate results are further operated

on, sent back to the server for further operation, and sent back to the client again to

produce a result (page 226, section 7, conclusion; pages 223-224, section 5, for

example, where encrypted data tuples are sent back and forth twice between the server

and the client, and remain encrypted while being processed at the server).

Claims 15 and 16 are directed to systems corresponding substantially to the system of Claim 1, and are rejected by a similar rationale.

Claims 17-30 are directed to methods corresponding to the functions of the systems of Claims 1-14, and are rejected by a similar rationale.

Claims 31-44 are directed to software implementations of the methods of Claims 17-30, and are rejected by a similar rationale.

Conclusion

20.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

    a.   Hacigumus et al, US Patent 7500111, is the patent that issued from the parent application Serial No. 10/449,421.

21.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Zachary A. Davis whose telephone number is (571)272-

3870. The examiner can normally be reached on weekdays 8:30-6:00, alternate

Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ZAD/
Examiner, Art Unit 2437

/Emmanuel L. Moise/
Supervisory Patent Examiner, Art
Unit 2437